

In The Claims:

Please Amend the Claims as Follows:

1. (Previously Presented) A vehicle braking system having a wheel coupled to a vehicle, a brake coupled to the wheel, wherein the wheel includes a friction component for inhibiting rotation of the wheel, the brake having a first state wherein said friction component is positioned a first distance from said wheel, and a second state, wherein said friction component is positioned a second distance from said wheel closer than said first distance, the vehicle braking system comprising:

a proximity sensor coupled to the vehicle and sensing an object along a direction of travel of the vehicle and generating a proximity signal therefrom; and

a controller receiving said proximity signal and generating therefrom a threat of collision prediction signal, said controller moving the friction component from the first state to the second state as a function of a high threat of collision determined from the threat of collision prediction signal, wherein movement of the friction component is halted through throttle pedal activation.

2. (Original) The system of claim 1 further comprising a vehicle speed sensor coupled to the vehicle and sensing a speed of the vehicle and generating a vehicle speed signal therefrom.

3. (Original) The system of claim 1 further comprising a brake pressure sensor coupled to the vehicle and sensing a current brake pressure and generating a current brake pressure signal therefrom.

4. (Original) The system of claim 3, wherein said controller receives said proximity signal, a vehicle speed signal, and said current brake pressure signal, and wherein said controller generates therefrom said threat of collision prediction signal.

5. (Original) The system of claim 4, wherein said threat of collision prediction

signal is a function of a closing velocity between the vehicle and said object above a threshold.

6. (Previously Presented) The system of claim 4 further comprising a brake pedal coupled to the vehicle, wherein the friction component moves from the second position to the first position when the brake pedal has not been depressed a predetermined time after said threat of collision signal is generated.

7. (Original) The system of claim 1, wherein said proximity sensor comprises a radar, lidar or vision based sensor.

8. (Original) The system of claim 1 further comprising a warning signal coupled to the vehicle and activating in response to said threat of collision signal.

9. (Original) The system of claim 8, wherein said warning signal comprises a warning light, a warning chime, or a brake light.

10. (Currently Amended) The system of claim 1, wherein the brake further comprises a third state, wherein said friction component is positioned a third distance from said wheel, said controller moving the friction component from the first state or the second state to said third state as a function of said high threat of collision determined from the threat of collision prediction signal and a signal indicating that a throttle pedal has been released, wherein movement of the friction component to said third state is a pre-charging operation.

11. (Original) The system of claim 10, wherein said controller will inhibit the friction component moving from the first state or the second state to said third state only if a failure with throttle actuation cannot be determined.

12. (Cancelled)

13. (Original) The system of claim 1, wherein movement of the friction component is halted in response to the vehicle near a limit of handling point regardless of an estimated threat.

14. (Previously Presented) The system of claim 1, wherein movement of the friction component is inhibited in response to failure of the vehicle braking system, a vehicle speed sensor or said proximity sensor.

15. (Currently Amended) A vehicle braking system having a wheel having a rotor coupled to a vehicle, a brake coupled to the wheel, wherein the wheel includes a friction component for inhibiting rotation of the wheel, the brake having a first state wherein said friction component is positioned a first distance from the wheel rotor, and a second state, wherein the friction component is positioned a second distance from the wheel rotor closer than the first distance, the brake further including a third state, wherein the friction component is positioned a third distance from the wheel rotor, the vehicle braking system comprising:

a proximity sensor coupled to the vehicle and sensing an object along a direction of travel of the vehicle and generating a proximity signal therefrom;

a vehicle speed sensor coupled to the vehicle and sensing a speed of the vehicle and generating a vehicle speed signal therefrom;

a brake pressure sensor coupled to the vehicle and sensing a current brake pressure and generating a current brake pressure signal therefrom; and

a controller receiving said proximity signal, said vehicle speed signal, and said current brake pressure signal, said controller generating therefrom a threat of collision prediction signal as a function of an analysis of a closing velocity between the vehicle and said object above a threshold and within a close proximity of the vehicle, said controller moving the friction component from the first state to the second state in a first pre-charging operation in response to a high threat of collision within said threat of collision prediction signal, wherein said controller moving the friction component from the first state or the second state to the third state as a function of said high threat of collision determined from the threat of collision

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prediction signal and a signal indicating that a throttle pedal has been released,
wherein moving the friction component from the second state to the third state is a
second pre-charging operation.

16. (Cancelled)

17. (Previously Presented) The system of claim 15, wherein said controller will inhibit the friction component moving from the first state or the second state to said third state only if a failure with throttle actuation cannot be determined.

18. (Previously Presented) The system of claim 15, wherein movement of the friction component is halted through throttle pedal activation.

19. (Previously Presented) The system of claim 15, wherein movement of the friction component is halted in response to the vehicle near a limit of handling point regardless of an estimated threat.

20. (Previously Presented) The system of claim 15, wherein movement of the friction component is inhibited in response to failure of the vehicle braking system, a vehicle speed sensor or a proximity sensor.

21. (Previously Presented) The braking system of claim 15 further comprising a brake pedal coupled to the vehicle, wherein said friction component moves from said second position to said first position when said brake pedal has not been depressed a predetermined time after said threat of collision prediction signal is generated.

22. (Original) The system of claim 15 further comprising a warning signal coupled to the vehicle and activating in response to said threat of collision signal, wherein said warning signal comprises a warning light, a warning chime, or a brake light.

23. (Currently Amended) A method for pre-charging brakes for a vehicle, said method comprising:

sensing an object in a near vicinity of the vehicle;
generating a proximity signal;
predicting a threat of collision between said object and the vehicle in response to said proximity signal;

determining whether said threat of collision is high;
engaging a second stage pre-charge short of engaging the brakes as a function of a high threat of collision and a signal indicating that a throttle pedal has been released; and

pre-charging the brakes in response to a high threat of collision prediction.

24. (Original) The method of claim 23, wherein pre-charging said brakes further comprises moving a friction component from a first position to a second position.

25. (Original) The method of claim 23 further comprising moving said friction component from said second position to said first position if a brake pedal is not depressed a predetermined time after said threat of collision.

26. (Original) The method of claim 23, wherein predicting said threat of collision further comprises sensing an operational parameter of the vehicle.

27. (Original) The method of claim 23, wherein predicting said threat of collision further comprises sensing a current brake pressure.

28. (Original) The method of claim 23 further comprising activating a vehicle warning device in response to said threat of collision.

29. (Original) The method of claim 23, wherein pre-charging further comprises calculating an amount of pre-charging required to avoid a collision.

30. (Cancelled).

31. (Previously Presented) The method of claim 23 further comprising inhibiting said second stage pre-charge only if a failure with throttle actuation cannot

be determined.

32. (Previously Presented) The method of claim 23 further comprising halting said second stage pre-charge through throttle pedal activation.

33. (Previously Presented) The method of claim 23 further comprising halting said second stage pre-charge in response to the vehicle near a limit of handling point regardless of an estimated threat.

34. (Previously Presented) The method of claim 23 further comprising inhibiting said second stage pre-charge in response to failure of the vehicle braking system, a vehicle speed sensor or a proximity sensor.